WHAT IS CLAIMED IS:

1. A method for burning emulsion fuel, comprising:

atomizing emulsion fuel; and

heating the atomized fuel by electromagnetic wave heating.

2. The method according to claim 1, wherein

the electromagnetic wave heating comprises microwave heating.

3. The method according to claim 1, wherein

the electromagnetic wave heating comprises induction heating.

4. The method according to claim 1, further comprising:

igniting the atomized fuel that is subjected to the electromagnetic wave heating.

5. A device for burning emulsion fuel, comprising:

an atomizer for atomizing emulsion fuel; and

a chamber in which the atomized fuel is subjected to electromagnetic wave heating.

6. The device according to claim 5, further comprising:

a high frequency power supply; and

a coil provided on the chamber, through which the high frequency power supply sends high frequency current.

7. The device according to claim 5, further comprising:

a microwave generator; and

a wave guide for transferring energy of microwave generated

by the microwave generator to the chamber.

8. A system for burning emulsion fuel provided with the device according to claim 5, comprising:

a fuel supply system for supplying the emulsion fuel to the atomizer.

9. The system according to claim 8, wherein

the fuel supply system includes a mixer for mixing water and fuel, the mixer comprising a pair of first and second plates parallel to each other, each of the plates provided on its opposite face with a plurality of holes arranged in a honeycomb pattern.

10. The system according to claim 9, wherein

the first and second plates of the mixer are mated in a manner that the holes on the first plate is off to the side of the holes on the second plate, the first and second plates collectively forming a labyrinth for the water and fuel therebetween.

11. The system according to claim 10, wherein

the first plate is provided on its central part an opening through which the water and fuel is supplied.

12. The system according to claim 11, wherein

the mixer comprises at least two pairs of the first and second plates stacked in a manner that either the first plates thereof or the second plates thereof are arranged next to each other.